Background
Although iron-deficiency and anaemia are common in pregnancy, prevention and management is surprisingly challenging and often inconsistent. Anaemia in pregnancy reduces tolerance to blood loss and is associated with increased morbidity, mortality and other adverse maternal and infant outcomes - although the evidence is limited. With advances in patient blood management, the focus is on comprehensive evidence-based clinical guidance to progress the management of iron-deficiency +/- anaemia from early in pregnancy to postpartum; to improve outcomes and reduce interventions.

Methods
The Australian Red Cross Blood Service (ARCBS) practice improvement strategy has been adapted as a Maternity Blood Optimisation (MBOP) pilot, by a multi-disciplinary team in one New Zealand area. However, specific challenges in applying current evidence to clinical practice remain. The main challenges are: defining treatment thresholds for iron-deficiency and anaemia; the influence of inflammation on hepcidin-mediated iron balance and oral iron dosing regimens. This pilot will be audited post-implementation.

Results
MBOP pre-pilot data showed that of the 85% of second trimester women (n=4411) who had ferritin tested (n=3766), 82% were iron-deficient and 7% had iron-deficiency anaemia. The ARCBS practice improvement strategy has reduced the rate of anaemia at delivery from 12% to 3%.

Discussion
Although the unresolved complexities of iron metabolism create challenges in applying the evidence to clinical guidelines and practice, knowledge advancements do suggest improved pathways for managing iron status beyond haemoglobin testing alone - based on a consistent approach of early recognition, prevention and treatment of iron deficiency with or without anaemia.

References
*Midwifery, Christchurch Women's Hospital, Christchurch, New Zealand; 2 Anaesthetics, Christchurch Women's Hospital, Christchurch, New Zealand; 3 Obstetrics, Christchurch Women's Hospital, Christchurch, New Zealand; 4 Liggins Institute, University of Auckland, Auckland, New Zealand.